

## What's New?

### Thank you to the Adaptive Living Expo!

On June 1<sup>st</sup>, we attended the Adaptive Living Expo at the Nepean Sportsplex. What a great turnout! It was fascinating to learn about all the supports for aging in place that are being developed.

We had great conversations with attendees and heard that there is real interest in the work we are doing. We also appreciated all of the very thoughtful comments that flagged new ideas and areas that are important to older adults, caregivers, family and friends. We had a lot of people sign up for our email list for this newsletter! Thank you to all who expressed interest in our work, we hope you enjoy this reading. As promised at the Expo, we have identified a number of current studies (see below) for which we are actively recruiting for.

# SAM3 Newsletter Summer 2024

## What is the SAM3 National Innovation Hub?

A collaboration between the Bruyère Research Institute and Carleton University in partnership with AGEWELL bringing together researchers from medicine, health sciences, engineering, industrial design, social work, and other disciplines. In our innovation projects and with industry, healthcare providers, academics, older adults and their families, we co-create, implement and study AgeTech solutions to support a healthy, autonomous, and independent lifestyle for the aging population.

Website: [www.sam3.ca](http://www.sam3.ca)

## SAM3 AgeTech Testing and Piloting Program



The objective of the project is to accelerate the growth of Canadian SMEs in the AgeTech ecosystem by providing them with services to test Aging in Place technologies.



Grace and Meg (L and R) running the SAM3 table at Adaptive Living Expo. Grace is going into her 3<sup>rd</sup> year in Systems and Computer Engineering (SCE) at Carleton and is working with the SAM3 team over the summer. Meg has been with the SAM3 team for nearly 1 year. As a graduate from Industrial Design (Carleton), she brings an interesting perspective to studies of user interfaces and human-centered design. Meg is starting her PhD in Health Systems Management (uOttawa) in the fall and we hope to continue tapping into her expertise.

## In this newsletter

We have some studies we are actively recruiting for! .....	2
Industry Partner Highlight .....	4
Trainee Highlight.....	4
Upcoming Events: .....	4

## We have some studies we are actively recruiting for!

### Establishing scoring norms on the Virage™ driving simulator at Bruyère Research Institute

Driving is an important activity of daily living, and it can become a key part of maintaining independence as we age. We were an instrumental part of the team funded for the Cardio-Neuro-Mind Canada Foundation for Innovation Award co-led by the uOttawa Heart Institute.

Our research team has purchased and installed a driving simulator at Bruyère Research Institute, and we need ‘normal, healthy’ older drivers to try it out. This is so we can establish norms for the machine that we can use in future studies.

We’ll ask you to fill out a few questionnaires and complete some scenarios on the driving simulator. We’ll also ask you to answer questions about simulator sickness and cognitive work load.

**Duration:** 1.5-2 hours, one time

**Location:** Élisabeth Bruyère Hospital (43 Bruyere St., Ottawa, ON)

**Eligibility:** healthy “normal” driver, not prone to motion sickness, active G/5 driver’s license in Ontario/Québec, aged 19+

Interested? Contact Meg Schwellnus at [mschwellnus@bruyere.org](mailto:mschwellnus@bruyere.org) for more details!

The simulator!

## Evaluating methods of measuring blood oxygen levels (SpO<sub>2</sub>) using smart devices

One of the important aspects of aging-in-place is being able to track our own vital signs – physiological information like heart rate and blood pressure. There are a number of different ways to do this and we are working with Canadian companies that are developing integrated systems specifically designed for use by older adults.

We are evaluating the potential for measuring health signs using a chest-based sensor, a smartphone camera, and a wristwatch sensor. The project will assess the accuracy and feasibility of the measurements with these different devices by comparing the results to those collected in parallel using a clinical grade fingertip pulse oximeter and blood pressure cuff.

You will be asked to do a small amount of physical activity for this study, and we will ask you to wear some sensors to measure blood oxygen levels, heart rate, and blood pressure for 1-2 minute intervals throughout your participation.

**Duration:** 15-30 minutes, one-time participation

**Location:** Carleton University

**Compensation:** 10\$

**Eligibility:** 18+ years, comfortable speaking and understanding English, no health condition that prevents you from doing prescribed exercise to raise heart rate

Interested? Contact the team at [raymondwallace@cunet.carleton.ca](mailto:raymondwallace@cunet.carleton.ca) for more details!

## Older adult usability with the Ingeni Health @Home technology

When new technologies and innovations go to market, a big part of their success is how they meet the needs of and function for their target users. Ingeni Health is coming out with a new system of home health technology products, and they are looking for feedback on their products before they fully bring them to market.

This project is aiming to evaluate the usability and understandability of the Ingeni Health product system, called Ingeni @Home. You will be asked to come to Carleton campus to participate in 1-3 focus groups with 2-4 other individuals. Each focus group will consist of a quick survey and a short presentation on the Ingeni @Home technology followed by questions about your experience with a specific use case for it. Each focus group will center around a different use case.

**Duration:** 2 hours

**Compensation:** 50\$ per focus group

**Location:** Carleton University

**Eligibility:** 55+ years of age, comfortable in speaking and understanding English

Interested? Contact Meg Schwellnus at [megschwellnus@cunet.carleton.ca](mailto:megschwellnus@cunet.carleton.ca) for more details!

## Industry Partner Highlight

### Esprit-ai bed sensors!

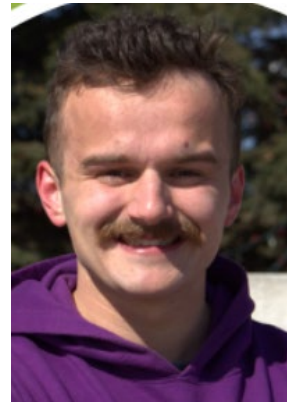
[Esprit-ai](#) developed a new sensor that measures sleep behaviours & patterns. In aging care settings, people often get out of bed multiple times each night. Kanata-based Esprit-ai's sensor collects data that can help identify conditions a patient might have, as well as notify staff when patients at risk of fall get out of bed.

They recently engaged us for an objective evaluation. We worked with Esprit-ai to help understand how their sensors identify out of bed events and learn about how best to notify staff in aging care settings.

## Trainee Highlight

### Phillippe Forster, MSc student in SCE

Phillippe is in his first year of his Master's program of Applied Science in Computer Engineering at Carleton University. He is working on improving at home patient monitoring systems for his thesis by focusing on developing a device that can monitor blood pressure, blood oxygen saturation, ECG activity, and stethoscope measurements. This device would help achieve the goal of reducing patient trips to hospitals.



We offer him congratulations, as he recently was awarded the Municipal Retirees of Ontario (MROO) Targeted Scholarship! This award supports graduate students in Ontario doing research or pursuing a career to positively impact the lives of seniors. It will directly help support Phillippe's work. We wish him great success!

## Recent and Upcoming Events:

Heidi Sveistrup is doing a talk at the Fall Council on Aging Meeting!

### Falls Prevention

November 20

More information to come in our Fall newsletter.

Bruce Wallace gave a radio interview!

**Grape Vine Show Interview with Bruce Wallace**

April 23, 2024

Link to the interview:

<https://carleton.ca/sam3/2024/interview-with-country-radio-99-3-with-dr-bruce-wallace/>